

Application Serial No. 10/655,762
Office Action Mailed January 17, 2006
Amendment Dated, May 17, 2006

REMARKS

Applicants have amended claim 1 to expedite prosecution of the preferred embodiments. Support for the Amendment can be found throughout the specification, for example, in Figure 1 and paragraphs [0008]-[0017], [0027] and [0037]. Claim 4 has been amended based upon Figure 1 and paragraph [0010].

Applicants have amended claim 6 to make explicit that which was implicit. Accordingly, claim 6 now recites to an enzyme that specifically cleaves the site of differentiation. Support for the Amendment can be found throughout the specification, for example at paragraphs [0036] and [0037].

Claim 8 has been amended to claim one preferred embodiment. Support for the Amendment can be found throughout the specification, for example, in Figure 1

Accordingly, no new matter has been introduced and the entry of the amendments is respectfully requested.

Applicants have cancelled claim 9.

Applicants submit herewith replacement drawings that now comply with 37 C.F.R. §1.83(a). The example sequences in Figure 1 have been clarified by removing the grey background of the original drawings. No new matter has been added and the entry of the replacement drawing is respectfully requested.

Claims 1-9 were rejected under 35 U.S.C. §112, second paragraph.

Applicants submit that the rejection be withdrawn for the following reasons.

Applicants have amended claim 1 to make explicit that which was implicit. Namely, the standard is not a sequence completely that different from the target sequence. Claim 1 has been further amended to define what the "enhanced product" is. Paragraphs [0008]-[0017] discuss a number of ways to obtain an enhanced product.

Claim 6 makes explicit that in that claim one uses an enzyme that can cleave either the target or the standard differently so as to make the difference between the standard and the target more easily detectable. The amendments to claim 6 have obviated its rejection.

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In light of the amendments to claims 1 and 6, Applicants respectfully submit that all claims now comply with the 35 U.S.C. §112, second paragraph, and request that the rejection of claims 1-9 under 35 U.S.C. §112, second paragraph be withdrawn.

Applicants appreciate the Examiner's statement that the preferred embodiment, shown in Figure 1, would be free of prior art. Accordingly, Applicants have amended claim 8 to claim this embodiment.

Claims 1, 3, 5, 7, and 9 were rejected under 35 U.S.C. §102(b) as anticipated by Bunn et al. (U.S. Patent No. 5,213,961).

Applicants respectfully disagree and submit that the rejection be withdrawn for the following reasons.

The template of Bunn does not have essentially the same sequence as the standard. This means that the PCT amplification will not be virtually identical. Bunn specifically notes, that a "small intron" can be used to differentiate the standard and the template (col. 5, lines 48-50). As claimed in the present application, the target and standard differ by one base. Additionally, the present method is used with essentially two consecutive amplification steps. First the entire sequences are amplified and then a method of enhancing the difference between the standard and the target is used. This makes it easier to measure the difference. In the method of Bunn, one simply amplifies the entire template and standard and then uses a size or restriction enzyme cleavage site difference in the sequence to quantitate the template amount. In the present method, the "enhancing" step introduces an additional amplification step that specifically amplifies the difference. This results in a simple and effective way to measure the amount of a target DNA. This method is not taught by Bunn. Accordingly, the rejection of the claims should be withdrawn.

Claim 9 was rejected under 35 U.S.C. §102(b) as anticipated by Arnold et al. (WO00/50869). The amendment has obviated this rejection.

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Claim 2 was rejected under 35 U.S.C. §103(a) as obvious over Bunn in view of Carroll et al., (U.S. Patent No. 5,906,744).

Applicants respectfully disagree and submit that the rejection be withdrawn for the following reasons.

As discussed, *supra*, Bunn does not disclose or suggest the claimed invention. The addition of Carroll does not overcome this deficiency. Carroll only discusses various amplification techniques. The combination does not suggest a method that make it simple to accurately measure the amount of target DNA in a biological sample as claimed. Accordingly, the rejection should be withdrawn.

Claims 4 and 8 were objected to as being substantial duplicates of at least one embodiment of claim 1. The amendment to claim 4 has obviated this rejection.

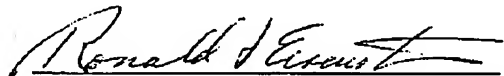
In view of the foregoing, Applicants respectfully submit that all claims are in condition for allowance.

Early and favorable action is requested. Examiner is encouraged to contact the undersigned attorney should she have questions regarding the application.

In the event that any additional fees are required, the PTO is authorized to charge our deposit account No. 50-0850.

Date: May 17, 2006

Respectfully submitted,



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**RECEIVED
CENTRAL FAX CENTER****MAY 17 2006****Practitioner's Docket No. 701586-53023****PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Charles R. Cantor, Chunming Ding

Application No.: 10/655,762

Group No.: 1637

Filed: 09/05/2003

Examiner: Kim, Young J.

For: QUANTIFICATION OF GENE EXPRESSION

MAIL STOP AMENDMENT**Commissioner for Patents****P.O. Box 1450****Alexandria, VA 22313-1450****TRANSMITTAL OF FORMAL DRAWINGS**

Dear Sir:

Attached please find the replacement drawings for the above-identified patent application in eight (8) sheets.

The replacement drawings do not introduce new matter and their entry is respectfully requested.

Date: May 17, 2006

Respectfully submitted,



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